

DETAILED ACTION

Response to Remarks

1. The Office Action has been issued in response to Amendment filed December 4, 2009. Claims 1-2, 4-6, 8, 12, 14 and 16-20 are pending. Applicant's arguments have been carefully and respectfully considered in light of the instant amendment, and are persuasive.

Interview Summary

The Examiner acknowledges that the interview summary dated October 23, 2009 was a draft interview summary and not the agreed upon interview summary given to Applicant Representative. The previous interview summary is withdrawn and the interview summary attached to this Office Action replaces that interview summary.

Claim Rejections – 35 USC section § 103

Applicant's arguments, see pages 11-14, filed December 14, 2009, with respect to the rejection(s) of claim(s) 1-2, 4-6, 8, 12, 14 and 16-20 under Background of Specification and Fig 1 in Giesecke et al (NPL document titled: "PIDSY® Post Identification System") have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-6, 8, 12, 14, 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al (Pub No.: US 2003/0059098) in view of Jones et al (20040153408) (herein referred to as Jones '098).

As to independent claim 12, Spec discloses a method of tracing bank notes (method for tracking and authenticating currency bills – see [p][001]) comprising the steps of: receiving a deposit of an initial bank note (insert stack of bills - see step 200 of Fig 3a); extracting one or more initial images from the initial bank note using a sensor (obtain an image of the bill - see step 212 of Fig 3a); attaching an initial transaction log to the one or more initial images (note that the customer is identified and the customer is linked to the inserted bill – see step 205 of Fig 3a and [p][0057]); receiving one or more images of a bank, which is physically the same bank note after being identified as counterfeit bank note, wherein the step of receiving one or more subsequent images comprises a deposit of a subsequent bank note (see [p][0059]); comparing the one or more initial images of the initial bank note to the one or more images of the counterfeit bank note by calculating value indicating the degree of similarity between the initial banknote and the counterfeit bank note in order to obtain a comparison result (see step 240 and 245 of Fig 3a and [p][0058]), wherein the steps of extracting one or more initial

images from the initial bank note and extracting one or more subsequent images of the counterfeit bank note are carried out using the same image extraction device (see [p][0060-0061]). Jones teaches retrieving the initial transaction log, however does not specifically mention retrieving the initial transaction log based on the comparison result, if the comparison result indicates that the one or more initial images of the initial bank note and the one or more images of the counterfeit bank note are within a range of similarity to one or more subsequent images of the counterfeit bank note. Jones discloses a method for tracing counterfeit money that includes the step of retrieving the initial transaction log based on the comparison result, if the comparison result indicates that the one or more initial images of the initial bank note and the one or more images of the counterfeit bank note are within a range of similarity (see [p][0005]) to one or more subsequent images of the counterfeit bank note. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modified the method of tracing currency bill of Jones with the method of Jones to produce electronic data representing the images, storing the electronic data representing the images in association with data representing the locations of the bills within the financial institution at specified times, and updating the stored data when the bills are moved to a different location, to permit retrieval of the images of the bills at specified locations at specified times

As to claims 14, Jones teaches the method, wherein the step of extracting one or more initial images comprises: extract a front side initial image of the initial bank note in

a first initial position; extract a front side initial image of the initial bank note in a second initial position; extract a back side initial image of the initial bank note in a first initial position; and extract a back side initial image of the initial bank note in a second initial position (note that the scanner has two heads and can extract images from both sides of the currency – see Fig 9, and [p][0102]).

As to claim 15, Jones teaches the method, wherein the step of receiving one or more subsequent images comprises: receiving a deposit of a subsequent bank note; and extracting one or more subsequent images from the subsequent bank note (see [p][0104]).

As to claim 16, note the discussion of claim 14 above.

As to claim 17, Jones teaches the method, wherein the step of comparing comprises comparing each subsequent image in each subsequent position a plurality of times to a corresponding initial image (see [p][0109]).

As to claim 18, Jones teaches the method, wherein the one or more initial images include a unique characteristic that is specific to only one bank note, wherein the initial bank note is the only one bank note with the unique characteristic, wherein the unique characteristic includes other information besides a serial number of the initial bank note (see [p][0110]).

As to independent claim 1, this claim differs from claim 12 only in that claim 1 is apparatus whereas, claim 12 is method and the limitations an automatic teller machine (ATM) electronically connected to one or more devices, the one or more devices comprising: a deposit device, wherein an initial bank note being transferred to an image extraction device, an image extraction device; a transaction log device, a comparison device and a retrieval device are additively recited. Jones discloses an automatic teller machine (ATM) (see Fig 1) electronically connected to one or more devices, the one or more devices comprising (see [p][0049], lines 8-10, where Fig 1 is used as a stand alone device such as an ATM): a deposit device (110, input receptacles; see Fig1) wherein an initial bank note being transferred to an image extraction device (see Fig 3a, step 210), an image extraction device (140, image scanner; see Fig 1); a transaction log device (160; memory; see Fig 1); a comparison device (140, controller, see Fig 1) and a retrieval device (140, controller, see Fig 1).

As to claim 2, Jones teaches the automatic teller machine the one or more devices further comprising at least one of: a storage device (180, memory, see Fig 1) configured to store the one or more initial images and the transaction log and a network link (see Fig 4a) to an external storage device configured to store the one or more initial images and the transaction log.

Claim 4 differ from claim 14, only in that claim 14 is method claim whereas, claim 4 is apparatus claim. Thus, claim 4 is analyzed as previously discussed with respect to claim 14 above

As to claim 5, note the discussion of claim 4 above.

Claim 6 differ from claim 17, only in that claim 17 is method claim whereas, claim 6 is apparatus claim. Thus, claim 6 is analyzed as previously discussed with respect to claim 17 above.

Claim 8 differ from claim 19, only in that claim 18 is method claim whereas, claim 8 is apparatus claim. Thus, claim 8 is analyzed as previously discussed with respect to claim 19 below.

As to claim 20, Jones teaches the method of wherein the steps of the method are stored on a computer-readable medium (memory, 160, see Fig 1) as one or more instructions (software, [p][0051], line 6) for tracing bank notes, wherein the one or more instructions, when executed by one or more processors (150, see Fig 1), cause the one or more processors to perform the steps of the method.

4. Claims 3 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al (Pub No.: US 2003/0059098) in view of Jones et al (2004/0153408) (herein referred to as Jones '098) further in view of Onishi et al (Pub No.: US 2002/0136457).

As to claim 19, the combination of Jones and Jones '098 as a whole does expressly disclose the method wherein the step of comparing comprises: analyzing image characteristics using a Euclid distance formula; and determining that the one or more initial images and the one or more subsequent images have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero.

Onishi discloses a method for establishing correspondences between an input image and a reference image ([p][0001], lines 1-3) that includes using a Euclid distance formula (normalized correlation coefficient, [p][0045], line 1-9); and determining that the one or more initial images and the one or more subsequent images have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero (see [p][0048], lines 1-8, where if the input image and the reference images are similar the normalized correlation coefficient becomes zero).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the teaching of Onishi with the teachings Jones as modified by Jones '098 to find similarities between an initial bill and a stored or subsequent bill in order to determine if the initial bill is counterfeit.

As to claim 3, note the discussion Onishi teaches the system wherein the comparison device is further configured to determine if the one or more initial images

are within a range of similarity to the one or more subsequent images (see [p][0048], lines 1-8).

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDRAE S. ALLISON whose telephone number is (571)270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571) 272-7223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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